AN ATTACHMENT PROVIDING A COMFORTABLE GRIP

FIELD OF THE INVENTION

The present invention is related to a device that provides comfortable grip to an article to which said device is attached. More particularly, the present invention is related to a transferable or a permanently affixable attachment having a cushion effect such that the cushion effect provides a comfortable grip without causing cramping or fatigue to the hand of the person using said attachment, and a method of making said attachment.

BACKGROUND OF THE INVENTION

Currently pencils and other writing instruments are of small diameter forcing the user to tightly hold the writing instrument. The necessity to grasp a writing instrument with such a small diameter contributes to stress within the user's hand and leads to cramping and other strains, particularly after a prolonged use. The gripping device of the present invention offers a novel design and approach to alleviating this problem that the available grips, which are generally made of stiff or solid material, do not offer. Accordingly, there is a need for providing an attachment to an article that permits the user to grasp the article more loosely and comfortably so as to lessen the likelihood of cramping and other discomfort to the user.

It is an additional need to effectively expand the diameter of the writing instrument to more naturally fit the contour of the user's hand so as to provide easy grasp without causing discomfort or stress to the hand. Further, such attachments will be more popular in the market if the attachment contains additional sensory features. Thus there is a need for providing an attachment to a writing instrument that, beside providing a comfortable grip, contains an additional sensor or sensory stimulant. The device of the present invention provides a unique feature that emits a sound in the form of a pleasant chirping noise when the hollow tubes of the inventive device are sufficiently compressed and released.

SUMMARY OF THE INVENTION

Accordingly, it is an advantage of the present invention to meet these and other needs through preparing a device that provides comfortable grip to an article to which said device is attached. The device may be removable or transferable to other articles.

It is another object of the invention to provide a grip which fits on a pencil, pen or other writing instrument.

It is still another object of the invention to provide a grip for a writing instrument that is pleasant and comfortable to hold and that conforms to an individual user's hand or fingers while writing and provides for an expanded area with which to operate the writing instrument.

Another advantage of the device of the present invention is that it obviates cramping, strain or discomfort to a user, which would otherwise occur after a prolonged usage of the writing instrument without the benefit of the device of the present invention.

It is yet another object of the invention to provide a soft grip with hollow chambers running laterally along the length of the grip which provide local or regional compression or collapse of the grip correspondent with the grasp of the user.

It is another advantage of the invention to provide a grip that creates a sound or noise when pressure is applied to the sides and such pressure is released.

Another advantage of the invention is to provide a grip which is simple in construction , low in cost and easy to manufacture.

To achieve the stated and other advantages of the present invention, as embodied and described below, the invention includes a device attachable to an article, comprising a means for providing a grip on an article without causing discomfort to the hand or fingers of a user, particularly on prolonged usage including a sound emitting feature.

Additional advantages and novel features of the invention will be set forth in part in the description that follows, and in part will become more

apparent to those skilled in the art upon examination of the following description of the drawings or upon learning by practice of the invention.

BRIEF DESCRIPTION OF THE DRAWINGS

References will now be made in detail to embodiments of the present invention, examples of which are only illustrative in the accompanying drawings.

Figure 1 illustrates the invention on a standard pencil as well as the orientation of the hollow chambers.

Figure 2 represents the overall dimensions of the grip, including the approximate diameter of the hollow chambers.

Figure 3 depicts the collapse of the hollow chambers as the user grasps the invention when the invention is placed upon the pencil.

Figure 4 demonstrates the method by which sound is produced by the hollow resonance of the tubes expanding after pressure is released from the grip.

DETAILED DESCRIPTION OF THE INVENTION

The invention includes a device attachable to an article so as to provide a sound producing cushioned grip on the article without causing stress, cramping, strain, fatigue or discomfort to the user, particularly upon prolonged usage, and a method for making the device.

It should be understood that unless defined otherwise, all technical and scientific terms used herein have the same meaning as commonly understood by one of ordinary skill in the art to which this invention belongs. Although any methods and materials similar or equivalent to those described herein can be used in the practice or testing of the present invention, the methods and materials described herein are preferred. Unless mentioned otherwise, the techniques employed or contemplated herein are standard methodologies well known to one of ordinary skill in the art. The materials, methods and examples are only exemplary and not limiting.

The term "chamber" as used herein means any void running laterally the entire or partial length of the invention with openings on either end of the chamber. The chambers, while depicted as cylindrical in nature herein, may be of any shape and may vary from about 1/16 inch to about 1/8 inch in diameter. The chambers must be collapsible as pressure is exerted upon the invention and expandable to revert to its original shape or form.

Figure 1 illustrates the placement of the grip on a writing instrument and illustrates the presence of the hollow chambers running throughout the grip. The grip may be placed upon other writing instruments such as pens, markers, crayons and highlighters and is also suitable for placement on tools such as precision knives, carving implements, and the like.

Figure 2 shows the approximate dimensions of the grip, including the approximate diameter of the hollow chambers. The chambers may vary from 1/16 inch to 1/8 inch. Figure 2 shows two offset rows of hollow chambers, however, the invention is not limited to that configuration. For instance, the diameter of the chambers could increase thus there would be one row of larger diameter chambers. If the overall diameter of the invention were to increase a third row of offset chambers could be incorporated as depicted in Figure 2.

Figure 3 demonstrates the collapse of the chambers consistent with the pressure applied to the grip by the user. When no pressure is applied to the grip, the chambers are fully expanded, providing support to the body of the grip. When pressure is applied during writing, as depicted in Figure 3, the chambers collapse in the area upon which pressure is applied. The portion of the chamber not subject to the collapse remains fully expanded to provide continued support to the body of the grip.

Figure 4 demonstrates the method by which the grip produces sound. Whether the grip is on or off of the writing instrument, when the chambers of the invention are compressed under pressure and that pressure is subsequently released, the rubberized or flexible nature of the grip permits the upper and lower portion of the chambers to remain in contact with one another for a short period of time. As the chamber separates or expands, a sound such as in the form of a chirping noise is produced and resonates

through the hollow chambers. The device could, of course, be so designed that the sound produced is of different nature or quality pleasant or suited to a typical user. The volume of the sound is increased when there is no writing instrument, as the sleeve into which the writing instrument is inserted acts as a large chamber increasing the resonance.

In a preferred embodiment of the invention, the device comprises a tubular product which acts as a sleeve over an article including a writing instrument in the area where the article is to be gripped. The device may be transferred from article to article or affixed to the article either temporarily or permanently.

In another embodiment of the invention, the article comprises a barrel shaped grip made of a soft rubber like material such as thermoplastic rubber ("TPR"). Within the body of the grip are hollow chambers which run along the length of the grip. The chambers, in conjunction with the soft material of the grip, provide for a collapse of the grip when pressure is placed upon the sides of the grip during writing use. It is this pliability, adaptability, flexibility and/or collapsibility from the hollow chambers and the rubberized body material that permits the grip to conform to the contour of user's individual style of handling the writing instrument or the article to which the grip is attached. The texture of the grip is typically smooth, soft, soothing and comfortable to the touch.

The grip can be formulated into a variety of colors and sizes and the chambers can be formed in different geometrical shapes. The grip can be colored in solid colors, glitter colors, translucent material, or multi-colored and the like as desired.

It may be noted that this invention can be utilized on items other than writing instruments such as "stick" type erasers, pencil sharpeners, stampers, markers and the like.

A method of making a device attachable to an article, comprises the essential steps of:

a. creating an injection mold for the device of the present invention as described in detail herein above including hollow chambers;

b. mixing of material and color for producing the desired device;

c. introducing the material in molten state into the mold;

d. cooling and removing the article from the mold; and

e. verifying quality of the article upon extraction from the mold.

Of course, having learnt the teachings of the present invention, one skilled in the art may vary the manufacturing process in different ways to meet the objectives of the present invention.

Example embodiments of the present invention have now been described in accordance with the above advantages. It will be appreciated that these examples are merely illustrative of the invention and not limitations thereof. Many variations and modifications will be apparent to those skilled in the art and all such modifications and variations are included within the purview and scope of the appended claims.